

CLAIM AMENDMENTS

1. (Currently amended.) A wiring board, comprising:
 - an insulative base material;
 - conductor patterns formed thereon;
 - a magnetic thin film formed on at least one of said conductor patterns and configured of a magnetic loss material, said magnetic loss material having a composition represented by M-X-Y, where M is at least one of Fe, Co, and Ni, X is at least one element other than M or Y, and Y is at least one of F, N, and O, in which a maximum value μ''_{\max} of loss factor μ'' that is the imaginary component in complex permeability characteristic of said magnetic loss material exists within a frequency range of 100 MHz to 10 GHz and said magnetic loss material is a ~~narrow-band~~ narrow band magnetic loss material having a relative bandwidth bwr not greater than 200% where the relative bandwidth bwr is obtained by extracting a frequency bandwidth between two frequencies at which the value of μ'' is 50% of the maximum μ''_{\max} and normalizing the frequency bandwidth at the center frequency thereof; and
 - said magnetic thin film being formed with an insulation layer interposed therebetween that covers the entirety of the surface of said wiring board on which said conductor patterns are formed.
2. (Original.) The wiring board according to claim 1, wherein said magnetic thin films are formed on said conductor patterns along outer surfaces of said conductor patterns.
3. (Cancelled.)

4. (Previously presented.) The wiring board according to claim 1, wherein said base material is configured of a flexible material.

5. (Previously presented.) The wiring board according to claim 1, wherein said base material is a flexible polyimide.

6. (Original.) The wiring board according to claim 1, wherein said magnetic thin films are produced by at least one of sputtering and vapor deposition.

7. (Previously presented.) The wiring board according to claim 1, wherein the thickness of said magnetic thin films is within the range of 0.3 µm to 20 µm.

8. (Cancelled.)

9. (Previously presented.) The wiring board according to claim 1, wherein X component of said magnetic loss material is at least one of C, B, Si, Al, Mg, Ti, Zn, Hf, Sr, Nb, Ta, and rare earth elements.

10. (Previously presented.) The wiring board according to claim 1, wherein, in said magnetic loss material, said M exists in a granular form dispersed in matrix of said X-Y compound.

11. (Previously presented.) The wiring board according to claim 10, wherein mean particle diameter of particles M having said granular form is within range of 1 nm to 40 nm.

12. (Previously presented.) The wiring board according to claim 1, wherein said magnetic loss material exhibits an anisotropic magnetic field H_k of 600 Oe (4.74×10^4 A/m) or less.

13. (Previously presented.) The wiring board according to claim 1, wherein said magnetic loss material is selected from $\text{Fe}_\alpha\text{Al}_\beta\text{O}_Y$ and $\text{Fe}_\alpha\text{Si}_\beta\text{O}_Y$.

14. (Previously presented.) The wiring board according to claim 1, wherein size of saturation magnetization in said magnetic loss material is within a range of 80% to 60% of saturation magnetization of a metal magnetic body consisting solely of M component.

15. (Previously presented.) The wiring board according to claim 1, wherein said magnetic loss material exhibits a DC electrical resistivity that is within a range of 100 $\mu\Omega\cdot\text{cm}$ to 700 $\mu\Omega\cdot\text{cm}$.

16. (Currently amended.) A wiring board, comprising:
an insulative base material;
conductor patterns formed thereon;
a magnetic thin film formed on at least one of said conductor patterns and configured of a magnetic loss material,
said magnetic loss material having a composition represented by M-X-Y, where M is at least one of Fe, Co, and Ni, X is at least one element other than M or Y, and Y is at least one of F, N, and O, in which a maximum value μ''_{\max} of loss factor μ'' that is the imaginary component in complex permeability characteristic of said magnetic loss material existing within a frequency range of 100 MHz to 10 GHz; wherein said magnetic loss material is a broad band magnetic loss material having a relative bandwidth bwr not greater smaller than 150% where the relative bandwidth bwr is obtained by extracting a frequency bandwidth between two frequencies at which the value of μ'' is 50% of the maximum μ''_{\max} maximum μ''_{\max} and normalizing the frequency bandwidth at the center frequency thereof.

17. (Previously presented.) The wiring board according to claim 16, wherein the size of the saturation magnetization of said magnetic loss material is within the range of 60% to 35% of the saturation magnetization of a metal magnetic body consisting solely of the M component.

18. (Previously presented) The wiring board according to claim 16, wherein said magnetic loss material exhibits a DC electrical resistivity having a value larger than $500 \mu\Omega\cdot\text{cm}$.

19. (Currently amended.) A wiring board, comprising:
a board of at least one layer comprising a conductor [[pad]] part, said conductor [[pad]] part comprising signal line conductor patterns; and
a magnetic thin film deployed at least on [[pad]] part of said board or said conductor part, and being deployed with an insulation layer interposed therebetween so as to cover said conductor patterns. patterns, wherein said magnetic thin film is configured of a magnetic loss material represented by [[M-X-Y.]] M-X-Y, where M is at least one of Fe, Co, and Ni Fe, Co, and Ni, Y is at least one of F, N, and O. F, N, and O, and X is at least one element other than M or Y, in [[the]] which the maximum value of μ''_{\max} of loss factor μ'' that is the imaginary component in the complex permeability of said magnetic loss material exists within a frequency range of 100 MHz to 10 GHz; and said magnetic loss material is a broad-band magnetic loss material having a relative bandwidth bwr not greater smaller than 150% where the relative bandwidth bwr is obtained by extracting a frequency bandwidth between two frequencies at which the value of μ'' is 50% of the maximum μ''_{\max} and normalizing the frequency bandwidth at the center frequency thereof.

20-22. (Cancelled.)

23. (Previously presented.) The wiring board according to claim 19, wherein said magnetic thin film is formed on said signal line conductor patterns.

24. (Previously presented.) The wiring board according to claim 19, wherein said magnetic thin films are formed so as to be separated from signal line conductor patterns in portions where said signal line conductor patterns are not formed.

25. (Cancelled.)

26. (Previously presented.) The wiring board according to claim 19, wherein said magnetic thin film is fabricated by at least one method of sputtering and vapor deposition.

27. (Previously presented.) The wiring board according to claim 19, wherein said magnetic thin film has a thickness with a range of 0.3 μm to 20 μm .

28. (Previously presented.) The wiring board according to claim 19, wherein said wiring board is a multilayer printed wiring board comprising a structure of at least 3 layers.

29. (Cancelled.)

30. (Previously presented.) The wiring board according to claim 19, wherein size of saturation magnetization in said magnetic loss material is within a range of 60% to 35% of saturation magnetization of a metal magnetic body consisting solely of M component.

31. (Previously presented.) The wiring board according to claim 19, wherein said magnetic loss material exhibits a DC electrical resistivity having a value larger than 500 $\mu\Omega\cdot\text{cm}$.

32. (Currently amended.) A wiring board, comprising:
a board of at least one layer comprising a conductor [[pad]] part, said conductor [[pad]] part comprising signal line conductor patterns; patterns; and

a magnetic thin film deployed at least on [[pad]] part of said board or said conductor part, and being deployed with an insulation layer interposed therebetween so as to cover said conductor patterns. patterns, wherein said magnetic thin film is configured of a magnetic loss material represented by [[M-X-Y.]] M-X-Y, where M is at least one of Fe, Co, and Ni Fe, Co, and Ni, Y is at least one of F, N, and O, F, N, and O, and X is at least one element other than M or Y, in which maximum value of μ''_{\max} of loss factor μ'' that is the imaginary component in the complex permeability of said magnetic loss material exists within a frequency range of 100 MHz to 10 GHz; wherein

said magnetic loss material is a narrow-band magnetic loss material having a relative bandwidth bwr not greater than 200% where the relative bandwidth bwr is obtained by extracting a frequency bandwidth between two frequencies at which the value of μ'' is 50% of the maximum μ''_{\max} and normalizing the frequency bandwidth at the center frequency thereof.

33. (Previously presented.) The wiring board according to claim 32, wherein size of saturation magnetization in said magnetic loss material is within a range of 80% to 60% of saturation magnetization of a metal magnetic body consisting solely of M component.

34. (Original.) The wiring board according to claim 32, wherein said magnetic loss material exhibits a DC electrical resistivity that is within a range of 100 $\mu\Omega\cdot\text{cm}$ to 700 $\mu\Omega\cdot\text{cm}$.

35. (Previously presented.) The wiring board according to claim 32, wherein X component of said magnetic thin film is at least one of C, B, Si, Al, Mg, Ti, Zn, Hf, Sr, Nb, Ta, and rare earth elements.

36. (Previously presented.) The wiring board according to claim 32, wherein, in said magnetic loss material, said M exists in a granular form dispersed in matrix of said X-Y compound.

37. (Previously presented.) The wiring board according to claim 36, wherein mean particle diameter of particles M having said granular form is within range of 1 nm to 40 nm.

38. (Previously presented.) The wiring board according to claim 32, wherein said magnetic loss material exhibits an anisotropic magnetic field H_k of 600 Oe (5.34×10^4 A/m) or less.

39. (Currently amended.) The wiring board according to claim 32, wherein said magnetic loss material is selected from $\text{Fe}_\alpha\text{Al}_\beta\text{O}_x$ and $\text{Fe}_\alpha\text{Si}_\beta\text{O}_x$ $\text{Fe}_\alpha\text{Al}_\beta\text{O}_y$ and $\text{Fe}_\alpha\text{Si}_\beta\text{O}_y$.